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**Report of farmers’ field day in Tsebet and Embahasti Kebeles, October 02, 2015**



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Through action research and development partnerships, Africa RISING will create opportunities for smallholder farm households to move out of hunger and poverty through sustainably intensified farming systems that improve food, nutrition, and income security, particularly for women and children, and conserve or enhance the natural resource base.

The three projects are led by the International Livestock Research Institute (in the Ethiopian Highlands) and the International Institute of Tropical Agriculture (in West Africa and East and Southern Africa). The International Food Policy Research Institute leads an associated project on monitoring, evaluation, and impact assessment.

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**Introduction**

Field days are among a range of knowledge sharing and learning mechanisms that are used by Africa RISING to foster adoption of technologies and insure wider technology impact. As a part of this continuous effort, A field day was organized in Tsibet and Embahasti kebeles which brought together relevant stakeholders-Woreda strategic IP (innovation platform) members, Kebele operational IP members, farmer research groups (FRGs) -involved in Africa RISING research-for-development work and other non-intervention farmers to reflect and jointly learn from the research activities being implemented on farmers’ field in 2015.

 **Field day Participants**

The field day participants were heads and representatives from:

* Endamehoni Woreda office of agriculture
* South Tigray Zone office of agriculture
* Endamehoni woreda administration
* REST/GRAD Project
* Mekele University
* Maichew AVET college
* Tigray Agricultural research institute (TARI)
* International potato center (CIP)
* Embahasti and tsibet Kebele DAS
* Embahasti and Tsibet kebele farmers

Field day Participant of different institutions

* Participants from ILRI

## **Overview of the field day**

The field day was organized on Friday 02/10/2015 in Africa RISING site of Tigray region, Endamekoni woreda, Embahasti and Tsibet kebeles. It was commenced in the morning at Embahasti kebele After Mr. Mohammed (site coordinator) welcomed and briefed the objective of the field day. On the opening speech, Mr. Habtamu Hagos (the chairman of IP and head of Endamehoni Agricultural office) indicated that Africa RISING project, for the last three years, has been working closely with Endamehoni office of Agriculture and other research institutes in food crop and livestock feed technologies, and natural resource management. Mr. Habtamu highlighted that improved potato, wheat, faba bean and barley varieties from PVS, Oat-vetch trials and feed trough/storage interventions are among the best technologies that should be scale out to the wider farming community. He also added that the unprecedented yield from Africa RISING Mekele-4 wheat and potato demonstrations are being used as the bench mark for South Tigray zone and Endamehoni woreda (94 quintals/ha and 528 quintals respectively). Mr. Habtamu closed his opening remark by encouraging field day participant to actively observe, draw lessons and provide constructive feedback. Mr. Gebrehiwot Hailemariam, CIP Africa RISING project coordinator, was facilitating the whole discussion.

In all planning and Implementation stages different stakeholders participated and played different roles for the success of the field work. Organizations like BoARD, TARI, Alamata ARC, Mekoni Research center, ATEVET agricultural college, CIP, GRAD, Mekelle University and Kebele Representative who participated in the woreda IP planning meeting took different responsibilities on implementation phase. Accordingly CIP provided Potato seed, TARI provided forage protocol, Alamata ARC delivered improved seed for Oat forage and technical support, whereas, Mekoni ARC, ATEVET College and BoARD provided technical backstopping and assisted on follow ups. Africa RISING site coordinators were also doing the coordination and major follow up work at the ground level.

**Highlights on demonstrated technologies**

In the two kebeles field crops and forage demonstration and verification were visited. From the field crops- Barely (HB1307 variety) demonstration, Wheat (Mekelle 4 variety), Drum wheat PVS, Faba bean (Gebelcho) demonstration, Field pea PVS of five varieties and potato (Gudeana variety); From Forage- tree Lucerne demonstration, four varieties of Lupine evaluation and Oat demonstration were visited In Embahasti Kebele. Similarly in Tsibet kebele field experiments on Barley, Potato and Faba bean were visited. .

* *Barley seed multiplication-*in Embahsti and Tsibet Kebeles, Kes birhanu Aregaw and Aberu Hagos are barley (HB1307) seed producer farmers who nicely manage their field. Kes Birhanu explained that from their evaluation of last year variety selection trials, they found HB1307 to be the best variety both in resistance to Logging and yield. The local varieties they used to cultivate had logging problem leading to high yield loses. It was also difficult to harvest. The new variety has strong stalk to resist logging. It is also high yielding variety.
* *Wheat seed Multiplication* - the Mekele 4-wheat seed multiplication was visited at Kalayu mesel’s Plot (Embahasti kebele). Gebrehiwot explained that from last year PVS result, Mekele-4 and Hidase were the two high yielding (86 and 70 quintals respectively) wheat varieties that were selected in the participatory evaluation. The hosting farmer also added his observation on how row planting makes weeding easy, increases the no tiller and wheat head size. Participants from the other sub kebeles also mentioned that they maintained Mekele-4 wheat seed from the last year CIAT demonstration and planted this year in wider areas and are happy with its current performance.
* *Field pea and Durum wheat PVS-* the varieties name and the trial objective was explained by Mr. Mohammed Ebrahim. It was observed that the PVS trial attracted the interest of farmers and other participants. Woreda office of agriculture representatives expressed their desire to participate in end season evaluation and scale up the selected varieties to the other areas.
* *Fababean seed multiplication*- four farmers of adjacent faba bean seed multiplication fields at Embahasti kebele and another farmer’s field at Tsebet kebele were visited; the site coordinator explained the variety’s yield potential and performance from the last year PVS (63 quintal/ha), other management practices like weeding (two times) and Redomil chemical spray (three times). Farmers and other participants were very surprised with the performance of the faba bean seed multiplication plot as faba bean in other farmers’ plot were totally damaged by disease. One model farmer from Tsibet Kebele (Negash syum) shared his experience saying; *“last year I planted faba bean next to the demonstration plot and my larger plot was totally damaged by disease and I left it there for livestock feed before harvesting time while the demonstration plots were totally intact”.* Negash syum recommends farmers from other kebeles to visit his well performing faba bean plot and wants to share his experience.
* *Potato seed multiplication-*potato seed multiplication at Embahasti kebele (on 0.7 ha) and Tsibet kebele (on 0.5 ha) of adjacent farmer plots were visited. Gebrehiwot explained for farmers and other participant that this high yielding and early maturing potato was demonstrated for two years before it was selected by farmers in participatory evaluation. The objective of this seed multiplication is to form seed producers’ cooperative which can produce potato seed and supply quality seed for the other farmers of the kebele and Woreda. Hayelom Gidey, one of the potato seed producers at Tsibet kebele explained well about the variety’s yield potential, management practice, planting technique and input used.
* *Oat-Vetch, Lupine and treelucern-* on adjacent plots of two farmers, participants visited Oat-vetch and Lupine feed intervention. A female hosting farmer (Behafta Meresa) explained that last year she saw oat-vetch with high biomass on her neighbor’s plot and this year she planted it on 100 m2 plot to feed her dairy cows. She is also managing Lupine adaptation trial and expecting, together with her neighbors, to plant the selected varieties next year. Tefaye Hogos (TARI-forage researcher) clarified to the field day participant about the use and importance of oat-vetch, Lupine and tree Lucerne.



2. Lupine Adaptation trial and Treelucern at Embahasti kebele



Figure 5. Wheat seed multiplication field visit at Embahasti kebele



Figure 6 field pea PVS visit and barley seed multiplication at Embahasti kebele

***Some concerns and challenges***

* The chemical spray for the Faba bean was only for the improved variety in the demonstration. But farmer have also shown interest to use it for local varieties. Farmers also mentioned it is not easy to find the chemical in the market or BoARD even when they want to purchase. Some farmers also seem to expect getting the faba bean chemical free of charge which demanded some participants to reiterate the objective of Africa RISING project.
* Farmers commented that Africa RISING project is undertaking different activities but only close to road sides, sub kebeles far from the road were not considered.
* Farmers also mentioned that they are growing potato now but are a bit anxious if there will be enough demand on market. They have also problem of potato seed storages.
* There were off-types (other varieties) observed in the barley seed multiplication field and lupine adaptation trial; this can affect the seed quality of the crops and result of experiment.
* Garlic diseases was also raised as major problem of the Tsibet kebele farmers and they request if there would be any intervention or a chemical spray that can solve the problem
* Some farmers said they are not allowed to spray chemicals because of bee hive available in their area.

**Feedback from participants on concerns and challenges**

* Demonstration trials are undertaken in areas that are easily accessible for different farmers and visitors during experience sharing and learning events. As a research project with limited resource, it is not easy for Africa RISING to address all kebeles and sub kebeles. We work on generating evidences as best technologies in specific areas so that farmers and other responsible partners will take up propagating the technologies.
* Government representatives emphasized, if farmers are interested in faba bean chemicals, they can get it through development from woreda at reasonable cost. Not even the government gives inputs free of cost.
* Experts said there is market demand within and outside the kebele for improved potato. In relation to the potato seed storage, CIP can supply about 100 iron corrugated sheet for DLS storage construction if farmers can come up with other essentials for the construction.
* For protecting garlic onion disease, experts advised to avoid using diseased seed or tuber and also use chemical dressed seed or tuber before planting. There is chemical in BoARD that farmers can purchase any time.
* A zonal expert explained that it is possible to use fungicides (not other chemicals) in places where there are bee hives.

**Research interventions with a potential of wider impact**

* **Barley (HB1307) variety:**  it is high yielder, logging resistance with six rows.
* **Wheat Mekelle 4 variety**: it is high yielder, have good head size and early maturing. From last year field day the woreda Agri-office took up best performing **Hidase wheat variety and this year they scaled out/distributed 75 quintals of seed to 3 kebeles of the woreda. They are happy with the current performance of the variety.**
* **Potato (Gudenea and Belete varieties):** are early maturing, high yielding and have good market demand
* **Faba Bean (Gebelcho) with Its chemical spray**: it has high resistance to disease, high yielder, early maturing, and with better biomass
* **Oats Forage grass variety**: high biomass/dry matter yield, good nutritive value, and palatability to animals
* **Vetch forage legume**: high dry matter yield, high nutritive value, good palatability and good nitrogen fixation ability
* **Tree Lucerne:** fast growing and high biomass yield, ever green, high nutritive value, good feed supplement and improves soil fertility.
* **Feed trough and feed storage**: Feed wastage reduction, increase quality and quantity of feed, comfort for animals feeding and save labor need for frequent feed provision and keeping animal not to stand on the feed.

**Over all insights of participants**

* Farmers are very impressed by the different technologies demonstrated on the field day and showed interest to take up the technologies and many asked for the source of seed of the above technologies, chemical and technical support.
* Endameknoi BoARD office promised to continue work closely with partners on scaling up of the best technologies and practices to other farmers of the kebele and other kebeles of the woreda.
* Africa RISING should also document well and continuously share best technologies and practices for outreaching different areas beyond the two kebeles.
* Working on market linkages for potato before harvest time is critical.
* The project is demonstrating promising technologies and practices; high effort is need from partners and particularly from BoARD and farmers themselves in disseminating technologies.
* The Farmers that undertake improved seed multiplication work on filed crop and forage varieties should not sell the seed out of the kebele to first satisfy the farmer’s seed demand within the kebele.
* Farmers said cultivating faba bean has been a hopeless practice of late. They thanked Africa RISING for showing them how to control the disease. In the coming production seasons many farmers can produce faba bean applying the chemical.
* Farmers were curious if other Africa RISING sites are performing better than their sites and suggested experience sharing event where they can learn or share experience from far away farmers.

Mrs. Jemila Ahmed, the Endameknoi woreda vice administration head, made a closing remark acknowledging the remarkable work Africa RISING is doing in a relatively short period of time. She emphasized on the big performance variation among the improved technologies introduced by the project and the local practices of the community. She reiterated the woreda’s commitment to promote the good performing technologies to other farmers through the extension system. She wrap up the remark with acknowledging the project, partners and field day participants who have contributed for the success of the event on behalf of the woreda Administration and people of Endamekoni Woreda.

1. **Summary of on farm Activities and participant farmers in 2015 main cropping season**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| No | List of activities | No of participant farmers | | | | Total areas |  |
|  |  | Tsibet Kebele | | E/hasti kebele | | Total No of participant | Areas |
|  |  | M | F | M | F |  |  |
| 1 | Potato seed multiplication (and fertility trial) | 23 | 4 | 8 | 4 | 39 | 2.2 ha |
| 2 | Fababean seed multiplication | 8 | 1 | 11 | 1 | 21 | 2 ha |
| 3 | Wheat seed multiplication | 5 | 1 | 3 | - | 9 | 1.12 ha |
| 4 | Barley seed multiplication | 2 | 2 | 3 | - | 7 | 1.2 ha |
| 5 | Fababean IDM | 1 | 1 | 2 | - | 4 | 800 m2 |
| 6 | Durum wheat PVS | 2 | - | 2 | - | 4 | 250 m2 |
| 7 | Field pea PVS | 2 | - | 1 | 1 | 4 | 250 m2 |
| 8 | Lentil PVS | 2 | - | 1 | 1 | 4 | 250 m2 |
| 9 | Lupine Adaptation trial | - | - | - | 1 | 1 | 168 m2 |
| 10 | Oat-vetch demonstration | 12 | 3 | 10 | 5 | 30 | 0.4 hectare |
| 11 | Tree Lucerne demonstration | 13 | - | 9 | 1 | 23 | 40 in ava |
| 12 | Desho grass Demonstration | 3 | - | 8 | - | 11 | 260 m2 |
| 13 | Crop residue shade and feed trough | 8 | 1 | 11 | - | 20 | 20 feed trough and shade |
| 14 | Wheat fertility trial | 28 | 9 |  |  | 37 | (125 m2 )x37 |
| Total No of participant | | 109 | 22 | 69 | 14 | 214 |  |

**Field day Participant list**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No. | Full name | Sex | Organization/institution | Position/Role | Role on WIP |
| 1 | Beyene Kahsay | M | Maichew ATVET college | College dean representative | Member |
| 2 | Abreha Negash | M | Maichew ATVET college | Technology Department head | Member |
| 3 | Asefa Asress | M | South Tigray zone office of agriculture | Irrigation coordinator | - |
| 4 | Hile kassa | M | South Tigray zone office of agriculture | Crop coordinator | - |
| 5 | Ataklti Tekeste | M | South Tigray zone office of agriculture | Extension coordinator | - |
| 6 | Habtamu Hagoss | M | Endamehoni Woreda Agri-Agriculture | Head | Chairman |
| 7 | Zenebe derbew | M | Endamehoni Woreda Agri-Agriculture | Extension coordinator | Member |
| 8 | Behafta Gessew | F | Endamehoni woreda Agri-office | seed multiplication expert | - |
| 9 | Jemila Ahmed | F | Endamehoni woreda Admin | Vice head | Member |
| 10 | Haftay Kahsay | M | REST/GRAD/ | Coordinator | Gender champion |
| 11 | Sihen Kinfu | F | Mekele University | Lecturer | Member |
| 12 | Tesfaye Hagoss | M | TARI | Forage researcher | M and E champion |
| 13 | Gebrehiwot Hailemeriam | M | CIP | Coordinator | IP facilitation champion |
| 14 | Manasbew Afera | M | Embahsti Kbele DA | Embahast kKeble Agri office | Kebele IP facilitatore |
| 15 | Gubena reda | M | Tsibet Kbelle DA | Tsibe kebele Agri office | Kebele IP facilitatore |
| 16 | Muez Kalayu | M | Tsibet Kbele DA | Tsibet kebele Agri office | Keble IP member |
| 17 | Embahast Kebele farmers (4 woman and 49 male) |  |  |  |  |
| 18 | Tsibet Kebele Farmers (86 male and 10 woman farmers) |  |  |  |  |
|  |  |  |  |  |  |